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Thomas Lich

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EXAMINER

GOODEN JR, BARRY J

ART UNIT

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3616

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DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, claim 10 recites "measures **only** in a substantially vertical direction" however, the specification does not provide support for the claim terminology.

Examiner notes that the application may disclose aligned only in a substantially vertical direction, but that does not preclude a sensor with a wider angle than the angle for alignment from measuring in other directions. Since the applicant does not provide support for the range of measurement of the sensor, even though it may be aligned substantially vertically, "measures **only** in a substantially vertical direction" is not supported by the specification. Examiner further notes that a sensor may have a different angle of sensing in a horizontal than in a vertical field of view, that drawings are not to scale, and that sensors have a range as well as a field thus simply because a field may cover an object if the object is outside of the range of sensing it will not be

detected. The applicant's specifications and conclusory arguments do not cover nor have they clarified these issues.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Andre et al., DE 19822184.

In regards to claims 10-13 and 16, Andre et al. discloses all of the claimed elements including a device for detecting an obstacle underide, comprising:

at least one vertical distance measuring device (2) situated on a vehicle front and aligned vertically to detect an obstacle underide, wherein the vertical distance measuring device measures in a substantially vertical direction (Reference is made to Figures 1 and 2) away from a vehicle underside (Reference is made to Figure 2);

wherein the vertical distance measuring device includes at least one transceiver;

wherein the at least one transceiver includes one of an ultrasonic sensor or a radar sensor;

wherein the vertical distance measuring device includes at least one video sensor; and,

wherein the device is connectable to a control unit for a restraining arrangement in such a way that the control unit triggers the restraining arrangement as a function of a signal of the device (Reference is made to Figure 2 and the Abstract).

Examiner notes with respect to claim 10, that the sensor of Andre et al. is aligned vertically and is clearly capable of detecting in a vertical direction away from a vehicle underside (Reference is made to Figures 1 and 2).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14, 15, and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andre et al.

In regards to claims 14 and 18, Andre et al. discloses all of the claimed elements excluding the vertical distance measuring device explicitly located on a bumper or the vertical distance measuring device being situated on the rear bumper.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have located the vertical distance measuring device on the front or rear bumper, since it has been held that rearranging parts of an invention involves

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only routine skill in the art and since it is old and well known that a bumper is generally the first item to sense oncoming, impending and/or occurring data, distances and impacts, as such it is obvious to provide sensors, impact sensors, infrared sensors, lights, distance sensors, deer whistles and impact absorbing material placed on the bumper.

In regards to claim 15, Andre et al. discloses all of the claimed elements excluding the at least one device comprising four vertical distance measuring devices.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided four vertical distance measuring devices as claimed, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art and since it is old and well known to provide multiple sensors so as to enable fault detection, redundant detection, stereoscopic sensing and to cover a wider area.

In regards to claims 24 and 25, sending predominately non-zero signals if an obstacle is not detected in the area above the bumper, and sends non-zero signals if the obstacle is detected in the area above the bumper relates to the range of sensing.

It would have been obvious to one of ordinary skill in the art at time of the invention to have provided a sensor with an appropriate range of measurements so as to not detect obstacles that are not close enough to cause an impact with the vehicle so as to provide a sensor that only provides relevant data and not extraneous data which would then require filtering.

Examiner notes that the term "predominately" does not preclude non-zero measurement from in situations where an obstacle is detected outside of the area above the bumper. Furthermore, the applicant's figure depicts a field and range of detection that extends beyond a vertical area directly above a bumper, which appears incongruent with the claim language and arguments.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andre et al. in view of Cho, US Patent 6,408,237.

In regards to claim 17, Andre et al. discloses all of the claimed elements excluding the device configured for the purpose of sensing pedestrians.

Cho discloses a system utilizing EM radiation (radar) or ultrasonic device wherein the device is configured for the purpose of sensing pedestrians.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Andre et al. in view of the teachings of Cho to include the device configured for the purpose of sensing pedestrians so as to prevent damage to pedestrians during collision thereby increasing safety.

Examiner notes with respect to claim 17, the recitation wherein the device "is configured to sense pedestrians", does not serve to distinguish because it is a functional recitation. Furthermore it has been held that performing a function is not a positive limitation but only requires the ability to so perform. Examiner suggests replacing with a positive structural recitation.

An apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim (Reference is made to MPEP 2114).

### ***Response to Arguments***

8. Applicant's arguments filed June 8, 2009 have been fully considered but they are not persuasive.

Examiner maintains the previous rejection is proper.

In response to the applicant's arguments concerning "measures only in a substantially vertical direction" the claim terminology and the specification are not commensurate in scope, i.e. alignment does not equate to the field or range of measurement. Applicant's amended specification which the arguments rely upon clearly discloses "The device according to the present invention should be designed in such a way that it preferably senses over the entire bumper", but does not disclose how many sensors or the field of views they are capable of covering, thus supporting the examiner's "conclusory" statements. As such, there is no support found for the claimed terminology. Examiner maintains the 112, 1st rejection is proper.

In response to the applicant's arguments concerning the art rejections, the arguments rely on terminology not supported by the specification and rejected under

112, 1st, since the examiner has shown the 112, 1st rejection to be proper the applicant's arguments are moot and not commensurate with the scope of the invention. Examiner maintains the previous art rejection is proper.

Examiner notes with respect to claims 14, 15 and 18; it is clearly common knowledge that a bumper is the first item to sense oncoming, impending and/or occurring data, distances and impacts. That is the reason for a bumper and why it is where impact sensors, infrared sensors, occasionally lights, distance sensors, deer whistles and impact absorbing material are placed. Additionally it is common knowledge to place multiple sensors so as to enable fault detection, redundant detection, stereoscopic sensing and to cover a wider area. A statement in the applicant's specification that coincides with common knowledge does not negate common knowledge as a reason for combining references.

Nevertheless, the applicant argued that the reference did not include the sensor located as claimed or the number of claimed sensors, which would be a traversal to an anticipation reference as such the rejection was not adequately traversed.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. Gooden Jr. whose telephone number is (571)272-5135. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-7742. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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